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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Peng Chen et al.

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Examiner: Unknown

Title: AUTOMATICALLY ALLOCATING AND  
REBALANCING DISCRETIONARY PORTFOLIOS

CUSTOMER NUMBER: 28465

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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**PETITION TO MAKE SPECIAL**

**ACCELERATED EXAMINATION – MPEP 708.02 PART VIII**

Pursuant to MPEP 708.02 Part VIII, Applicants hereby petition the Office to grant special status to the above-captioned application and examine it out of order. In support of their petition, Applicants state as follows:

**A. Petition Fee.**

Applicants herewith attach a check for \$130.00 as required by 37 CFR 1.17(h).

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**B. Claims.**

Applicants have amended the claims in a preliminary amendment accompanying this petition. All claims after amendment are believed to be directed to a single invention. After amendment, there are three independent claims each of a method (Claims 11, 74 and 86), a system (Claims 30, 64 and 88) and a machine-readable medium (Claims 51, 80 and 87).

Claim 11 recites a method of automatically rebalancing an investor portfolio, including the steps of dividing the human capital of an investor into at least first and second investment types which have different degrees of risk, adding that human capital to a financial worth of the investor to derive a total worth, making a target allocation of the total worth between at least first and second investment types, and making a recommendation for allocation of the assets of the financial worth of the investor such that the asset allocation of his or her total worth most closely approaches the target allocation. Independent system Claim 64 and independent medium Claim 51 recite substantially corresponding subject matter.

Claim 30 recites a system for allocating assets of each of a plurality of participant portfolios in a benefit plan. An automated independent investment advisor calculates a human capital for each plan participant, and formulates instructions to an automated benefit plan manager as to the allocation of assets of each participant portfolio based on that human capital calculation. Independent method Claim 74 and independent medium Claim 80 recite substantially corresponding subject matter.

New independent Claim 86 recites a method for automatically rebalancing a portfolio of an investor, including the steps of summing a financial worth of an investor with a determined human capital of the investor to derive a total worth of the investor, making a target allocation of

the total worth of the investor according to predetermined, stored criteria, and recommending an allocation of assets of the financial worth of the investor such that the asset allocation of the total worth approaches the target allocation. New medium Claim 87 and new system Claim 88 recite substantially corresponding subject matter.

All claims contain the unifying concept of using the human capital of the investor to automatically derive a recommended allocation of assets for his or her portfolio. This concept is not seen in the prior art.

**C. Pre-examination Search.**

Applicants have caused a pre-examination search to be made in Class 705, Subclasses 1, 35, 36 and 37. In addition, a search was conducted on the EAST and WEST USPTO systems. Examiner James Trammell in Class 7058 (Art Unit 2764) was consulted in confirming the field of search.

**D. Copies of Prior Art References.**

Applicants herewith submit one copy each of the references deemed most closely related to the subject matter encompassed by the claims. Other references believed to be less pertinent are listed, together with the references described in this petition, on an accompanying information disclosure statement. Where these references are not issued U.S. patents or published U.S. patent applications, copies of them have been provided also.

In many cases, the references discussed below bear publication dates which are less than one year earlier than Applicants' filing date. Applicants reserve the right to demonstrate that such references are not prior art to Applicants' invention, assuming that their date of invention is earlier than the effective dates of these references. But Applicants believe that this exercise will

not be necessary in view of the technical distinctions Applicants have drawn between each of these references and the claims as they are now presented after the entry of the preliminary amendment.

**E. Detailed Discussion of Prior Art References Deemed Most Pertinent.**

Applicants set forth below a detailed discussion of these references, pointing out with particularity how the claimed subject matter is patentable over them.

**1. Tarbox et al. US2002/0169701 A1**

Tarbox et al. disclose the concept of Human Capital at Paragraph 44 and, at Paragraph 105, states: "Other changes, including reallocation of assets at 90, will be made to the passage of time (e.g. the aging of the individual plan participant) and external changes (e.g. changes in the capital markets) also in accordance with the procedures established by the Independent Expert 38." The specification defines the Independent Expert 38 as a natural person who is an investment advisor. Paragraph 95.

Tarbox et al. do not disclose or suggest human capital considered as a defined asset type which affects the recommended allocation of an investor's assets, as is required by all of the claims. Tarbox et al. do not show an automated independent investment advisor (Claims 30, 74, 80 and their dependencies). Further, Tarbox et al. do not show or suggest the following elements found in Claims 11, 51, 64 and their dependencies: the division of human capital into two investment types, the addition of human capital to financial worth to obtain the total worth of an investor (a limitation that also appears in claims 86 – 88), the making of a target allocation among at least two investment types based on the total worth of the investor, and instructions to a

portfolio manager to reallocate of assets of the financial worth of the investor such that the asset allocation of the total worth of the investor most closely approaches the target allocation.

In discussing each of the other pertinent references below, Applicants discuss Claims 11, 30, 51, 64, 74, 80 and 86 – 88 only, and assert that any claim dependent on one of these last claims is patentable in view of such pertinent reference at least for the reasons expressed for the independent claim from which the dependent claim depends.

**2. Arena et al. US2002/0174045 A1**

Arena et al. show, at e.g. Paragraph 75, a computer program product which manages the rebalancing of assets to achieve a composite asset allocation model. At Paragraph 90 there is disclosed an automatic initiation of a rebalance function upon detecting that assets are out of balance by more than a predetermined amount. But Arena et al. do not consider the human capital of an investor in performing this rebalancing, as is required by all of the claims. With respect to Claims 11, 51, 64 and their dependencies, Arena et al. further do not show the division of human capital into at least two investment types or the use of human capital in calculating the total worth of an investor, nor do Arena et al. consider the overall balance of the investor's total worth. Relative to Claims 30, 74, 80 and their dependencies, Arena et al. do not show an automated independent investment advisor separate from an automated benefit plan manager.

**3. Arena et al. US2002/0174042 A1**

This publication shows the reallocation of assets in an investor's portfolio according to a predetermined algorithm, at e.g. Paragraphs 23 and 24. But this reallocation is not a rebalancing to predetermined ratios of investment types, see Paragraph 25. The reference

does not discuss the concept of human capital at all, the treatment of which is required by all of the claims, nor evaluation of the allocation of an investor's total worth as opposed to merely his financial worth (Claims 11, 51, 64, 86 – 88 and their dependencies), nor the separation of an automated independent investment advisor which makes allocation recommendations from an automated benefit plan manager which directs the trades (Claims 30, 74, 80 and dependencies).

**4. Arena et al. US2002/0184129 A1**

This reference discusses the management of an annuity. At Paragraph 75, there is disclosed the automatic reallocation of an investment as triggered by a variation in investment value. The reference does not use the concept of human capital, as is required by all of the claims, nor evaluation of the allocation of an investor's total worth as opposed to merely his or her financial worth (Claims 11, 51, 64, 86 - 88 and dependencies), nor the separation of an automated independent investment advisor from an automated benefit plan (Claims 30, 74, 80 and their dependencies)

**5. Wallman US2003/0120574 A1**

This reference shows reallocation of assets to a model which may change; see Paragraphs 117, 206. At e.g. Paragraph 272, there is disclosed "resynching" to a model folio. The reference does not use human capital in making asset allocations, as is required by the claims. Nor does Wallman '574 consider evaluating an investor's total worth as opposed to just his or her financial worth (Claims 11, 51, 64, 86 – 88 and their dependencies).

**6. Wallman US2003/0120575 A1**

Wallman '575 shows automated rebalancing of portfolios at, e.g., Figure 3, rebalance steps 38a and 38b; Figure 52, rebalancing to a target; Paragraph 131, rebalancing of a

model to target weights; Paragraph 141, fully automated “sync” process triggered by an initial sync request by a (human) model manager; Paragraph 203, resync to a target folio. Wallman does not, however, consider human capital assets in his rebalancing process steps, as is required by all of the claims. Further, relative to Claims 11, 51 and 64, Wallman does not disclose or suggest (a) dividing human capital into at least two classes which differ from each other in degree of risk, (b) adding the human capital to the financial worth of an investor in order to obtain the total worth of the investor (as is also required by Claims 86 – 88) , (c) making a target allocation of the total worth of the investor into at least two investment types, or (d) making a recommendation to reallocate the assets of the investor’s financial worth such that the asset allocation of the total worth of the investor most closely approaches the target allocation (as is also required by Claims 86 – 88). Relative to Claims 30, 74 and 80, Wallman does not show or suggest the separation of an automated independent investment advisor from an automated plan manager.

**7. Wallman 6,601,044**

Figure 2 of this patent shows a questionnaire on the current condition and uses for investments (e.g. college). At Column 14, there is disclosed the consideration of other investments not acquired through the system advisor. But Wallman does not disclose or suggest the concept of human capital as an asset of the investor, as is required by all of the claims. Relative to Claims 11, 51, 64 and their dependencies, Wallman ‘044 does not disclose or suggest the division of human capital into two investment types, nor the proper allocation of assets of the total worth (as opposed to just the financial worth) of the investor (also required by Claims 86 – 88). Relative to Claims 30, 74, 80 and their dependencies, Wallman ‘044 does not show the

separation of an automated independent investment advisor from a benefits plan manager which allocates plan assets.

**8. Yip US2003/0065602 A1**

Yip shows the automatic rebalancing of assets which have been grouped in clusters, at e.g. Paragraphs 37, 38, 52 and 66. Yip does not disclose or suggest the consideration of an investor's human capital in allocating assets, as is required by all of the claims. Relative to Claims 11, 51 and 64 and their dependencies, Yip does not show division of an investor's human capital into at least two investment types, nor does Yip consider the proper allocation of assets of the total worth of the investor (a limitation which also appears in Claims 86 – 88). Relative to Claims 30, 74, 80 and their dependencies, Yip shows no separation between an automated independent investment advisor which recommends an allocation of assets, and an automated benefits plan manager which allocates the assets of the plan.

**9. Brown et al. US2002/0059127 A1**

Brown et al. show the rebalancing of assets to track a stock index fund. See Paragraphs 16, 39. However, Brown et al. do not show the use of human capital in deciding how to rebalance a portfolio, as is required by all of the claims. Relative to Claims 11, 51, 64 and their dependencies, Brown et al. do not show the division of human capital into at least two investment types, nor do Brown et al. consider the proper allocation of assets of the total worth of the investor (a limitation which is also present in Claims 86 – 88). Relative to Claims 30, 74, 80 and their dependencies, Brown et al. do not show any division between an automated independent investment advisor and an automated benefits plan manager which allocates plan assets.



**10. Kim et al. US2002/0062272 A1**

Kim et al. contemplate that an investor may have assets other than publicly traded securities, such as real estate and bank deposits. See e.g. Paragraphs 123 and 138. But Kim makes no attempt to rebalance a portfolio, much less an automated step of doing so, and does not show human capital expressed as an investor asset, as all of Applicants' claims require. Relative to Claims 11, 51, 64 and their dependencies, Kim et al. do not divide human capital into at least two investment types, nor do Kim et al. attempt any reallocation of assets of the financial worth of the investor, such that the allocation of assets of the total worth of the investor most closely conforms to a calculated target allocation (as is also required by Claims 86 – 88). Relative to Claims 30, 74, 80 and their dependencies, Kim et al. make no separation between an automated independent investment advisor and an automated benefits plan manager.

**11. Rhee US2002/0138383 A1**

Rhee discloses a JAVA – based trading system. Stock selection is based on an efficient frontier approach. Paragraph 2. There is automatic trading and reallocation, Paragraph 46, and rebalancing, Paragraph 63. But Rhee does not disclose or suggest the concept of human capital in making allocation or rebalancing decisions, as all of the claims require. Relative to Claims 11, 51, 64 and their dependencies, Rhee does not show division of human capital into at least two investment types, nor does Rhee attempt any reallocation of the assets of the financial worth of the investor such that the allocation of assets of the total worth of the investor most closely conforms to a calculated target allocation, as is also required by Claims 86 - 88. Relative to Claims 30, 74, 80 and their dependencies, Rhee does not disclose or suggest a separation between an automated independent investment advisor and an automated benefits plan manager.

**12. Fernholz US2002/0174047 A1**

Fernholz '047 discloses an investment system in which rebalancing trades are executed at staggered intervals to re-optimize investor portfolios, Paragraphs 25–27. Paragraph 48 discusses rebalancing process step 700. But Fernholz nowhere discloses or suggests the use of human capital in these reoptimization/rebalancing steps, as is required by the claimed invention. *A fortiori* and relative to Claims 11, 51, 64 and their dependencies, Fernholz does not disclose or suggest the division of human capital into at least two investment types, nor the reallocation of the assets of a financial worth of the investor such that the allocation of assets of the total worth of the investor most closely conforms to a calculated target allocation (a limitation also present in Claims 86 – 88). Relative to Claims 30, 74, 80 and their dependencies, Fernholz does not disclose or suggest a separation between an automated independent investment advisor and an automated benefits plan manager.

**13. Fernholz 5,819,238**

This patent issued to Fernholz shows, at Figure 6A, and Col. 17, lines 28-33, the rebalancing of a portfolio based on a user-settable flag. Col. 5, lines 7-13, discloses automated portfolio rebalancing. But Fernholz neither discloses nor suggests the factoring in of an investor's human capital in allocating portfolio assets, as is required by all of the claims. Relative to Claims 11, 51, 64 and their dependencies, Fernholz '238 does not disclose or suggest the division of an investor's human capital into at least two investment types, nor does Fernholz '238 consider the rebalancing of the assets of an investor's financial worth such that the assets of the investor's total worth more closely conform to a predetermined target allocation (which is also required by Claims 86 – 88). Relative to Claims 30, 74, 80 and their dependencies,

Fernholz '238 does not disclose or suggest a separation between an automated independent investment advisor on the one hand and an automated benefits plan manager on the other.

**14. Luskin et al. 5,812,987**

This patent shows changing the assessment of investor risk tolerance as a function of time. In Col. 7, lines 15-18, the data inputs on contribution data are disclosed to include salary. Luskin et al. disclose reallocation of investments. They do not show the use of the concept of human capital in making portfolio allocations, as is required by all of the claims. Relative to Claims 11, 51, 64 and their dependencies, Luskin et al. do not show division of human capital into at least two investment types. Relative to Claims 30, 74 and 80, Luskin et al. do not show or suggest an automated independent investment advisor separate from an automated benefit plan.

**15. Efficient Solutions, Inc., [www.effisols.com](http://www.effisols.com)**

This web page is believed to have been available to the public at least as early as March 2, 2001. The product "MvoPlus" shows an automatic portfolio rebalancing function which is used to predict future performance. This web page does not use the concept of human capital as is required by all of the claims, or the division of human capital into at least two investment types (Claims 11, 51, 64 and their dependencies), or the separation of an automated independent investment advisor from an automated benefits plan manager (Claims 30, 74 and 80 and their dependencies), nor the allocation of financial worth such that the allocation of assets of the investor's total worth approaches a target allocation (Claims 11, 51, 64, 86 – 88 and their dependencies).

**16. Delaney and Reichenstein, "An Expanded Portfolio View Includes Real Estate and Human Capital", AAI Journal (July 1996)**

This article discusses the definition and use of human capital. On page 9, human capital is defined as the present value of future income. The article considers this asset a part of an investor's portfolio. However, this article neither discloses nor suggests the use of this human capital in making an automated allocation of portfolio assets, as is required by all of the claims, nor does it disclose the division of human capital into at least two investment types (Claims 11, 51, 64 and their dependencies), nor the separation of an automated independent investment advisor from an automated benefits plan manager (Claims 30, 74, 80 and their dependencies).

**17. Hanna and Chen, "Subjective and Objective Risk Tolerance: Implications For Optimal Portfolios", Financial Counseling and Investing, Vol. 8(2), pp. 17 – 26 (1997)**

On page 20 there is disclosed a utility function which includes "human wealth", which is the present value of noninvestment income. The reference suggests changes to a portfolio according to the amount of human wealth, which decreases as a function of age. The reference shows no automated allocation of portfolio assets as a function of the amount of human wealth or capital, as is required by all of the claims. Nor is there disclosed a division of human wealth or capital into at least two investment types (Claims 11, 51, 64 and their dependencies) nor a separation of an automated independent investment advisor from an automated benefits plan manager (Claims 30, 74, 80 and their dependencies).

**F. Other Prior Art References.**

Other references were uncovered by the search, but are believed by Applicants to be less pertinent than the ones discussed above. They are listed in the Information Disclosure Statement

accompanying this Petition. Where they are not issued U.S. patents or published U.S. patent applications, Applicants have provided copies.

**G. Pre-First Office Action Interview**

Pursuant to the "Notice of Pilot Program to Permit Pre-First Office Action Interview for Applications Assigned to Art Units 3624 and 3628 and Request for Comments on Pilot Program", <http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/pilot.pdf>, Applicants request a pre-first Office Action telephonic interview with the undersigned at (312) 258 3762. Applicants have furnished a general statement of the state of the art and how the independent claims (claims 86 – 88 being deemed the broadest) distinguish over it. Applicants believe that the three closest references are Tarbox US2002 / 0169701 A1, the Delaney & Reichenstein article, and the Hanna and Chen article, in that they at least discuss human capital or "human wealth".

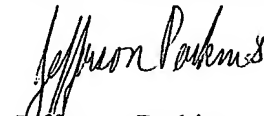
**H. Conclusion**

Applicants have met all requirements set forth in MPEP 708.02 Part VIII, and therefore respectfully request that their application be made special. Applicants await the decision of the Commissioner in this respect, a scheduling of a pre-First Action interview and a first action from the Examiner on the merits.

If any fees are owed in connection with this Petition which have not been paid herewith, please charge Deposit Account No. 18-2284. A duplicate sheet is enclosed.

Respectfully submitted,

**DASPIN & AUMENT, LLP**

A handwritten signature in black ink, appearing to read "Jefferson Perkins".

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